

REMARKS

The Applicants appreciate the thoroughness with which the subject patent application has been examined. By this amendment, certain claims have been amended as set forth above to overcome the Examiner's rejections and objections and more concisely claim and describe the present invention. Certain informalities in the specification have also been corrected. Claims 1-25 remain in the application for reconsideration by the Examiner. The Examiner's allowance of all pending claims is earnestly solicited.

MATTERS RELATED TO THE DRAWINGS

The Examiner has objected to Figure 4. In response, the Applicants attach an amended replacement version of Figure 4 as Attachment 1 for Examiner Bell's consideration.

MATTERS RELATED TO THE SPECIFICATION

Both the Examiner and the Applicants have identified certain typographical informalities in the specification and the Applicants propose to correct these informalities as indicated above in the marked-up specification paragraphs. The Applicants have also relocated certain text paragraphs as suggested by Examiner Bell. There has been no introduction of new matter into the specification.

MATTERS RELATED TO THE CLAIMS

NON-ART REJECTIONS

The Examiner has objected to claims 7 and 23 due to certain informalities as set forth in the Office Action.

To overcome the objection to claim 7, the Applicants have amended its dependency to claim 6 and also deleted "the" and substituted "a" in the last line of the claim. It is respectfully submitted that these changes should overcome the objection to claim 7.

As to the objection to claim 23, the Applicants have adopted the Examiner's suggested amendment.

The Examiner has rejected claims 1-3, 15-19, and 21-23 under Section 101, alleging that the claimed invention is directed to non-statutory subject matter.

The Applicants respectfully submit that the invention as set forth in claims 1-3, 15-19 and 21-23 is directed to statutory subject matter and that the claims are not “directed merely to an abstract idea that is not tied to a technological art, environment or machine which would result in a practical application producing a concrete, useful and tangible result to form the basis of statutory subject matter under 35 U.S. C 101.” As to independent claim 1, it includes structural limitations in the form of a search object and a knowledge base further comprising search nodes and joining links. The claim further refers to structural elements of a first and a second memory. The references to these structural elements and the interaction between them to traverse a search path are deemed sufficient under *In re Iwahashi* (888 F. 2d 1370, 12 UPSQ2d 1908 (Fed. Cir. 1989)) to render the claim statutory. The tangible result as set forth in claim 1 is a determination that a search object matches an entry in a data base.

Although the Examiner has not specifically indicated that claim 1 recites a mathematical algorithm, such may be inferred from his comments. It is thus also submitted that claim 1 does not recite a mathematical algorithm. Instead, the steps of storing, reading and comparing do not amount to a mathematical algorithm as they are not mathematical operations, but rather set forth a series of steps according to which the method of the claim is executed.

Since it has been suggested that claim 1 is statutory, claims 2, 3 and 15-17 dependent therefrom are also believed to be statutory.

Independent claim 18 is also not non-statutory as it's structural elements include a first memory, a second memory and a processor. Since the claim recites interacting structural elements it certainly cannot be considered merely an abstract idea.

Since claim 18 covers statutory subject matter, claims 19 and 21-32 dependent therefrom do as well.

REJECTIONS UNDER SECTION 103

Within the first claim group, the Examiner has rejected claims 1-3, 6, 13 and 15 under Section 103(a) as unpatentable over Bennett (5,813,001) in view of Bialkowski (5,463,777). Dependent claim 4 stands rejected under Section 103(a) as unpatentable over Bennett in view of Bialkowski and further in view of Pollack (6,571,238). Claim 5 stands rejected under

Section 103(a) as unpatentable over Bennett in view of Bialkowski and further in view of Nakano (6,636,802). Claims 7-9 and 16 stand rejected under Section 103(a) as unpatentable over Bennett in view of Bialkowski and further in view of Vahalia (6,625,591). Claims 10 and 11 stand rejected under Section 103(a) as unpatentable over Bennett in view of Bialkowski and further in view of Friedberg (6,662,184). Claim 12 stands rejected under Section 103(a) as unpatentable over Bennett in view of Bialkowski and further in view of Corl (6,772,223). Claim 14 stands rejected under Section 103(a) as unpatentable over Bennett in view of Bialkowski and further in view of Benayoun (6,516,319).

To further distinguish the invention over the cited art, the Applicants have amended the first and second paragraphs of claim 1 to read as follows: “storing a first portion of the decision tree structure in a first memory having a first memory access time, wherein the first portion comprises a first plurality of search nodes and interconnecting links, and wherein the first memory access time is less than the second memory access time.” Support for these amendments can be found in the paragraph beginning at line 21 on page 7 and the paragraph beginning at line 3 on page 8.

Bennett discloses a method and apparatus “for searching a knowledge base to determine whether a search object matches any of a plurality of knowledge base entries.” Bennett approaches the knowledge tree search process by noting that, “since performance is generally increased by decreasing the worst case number of steps required to complete a search, it is desirable to maximize the number of bits examined at each level.” See column 9, beginning at line 14. According to Bennett, the factors that are important in determining the manner in which the scattered memory access (SMA) device should best be implemented are speed of searching and updating, as well as memory consumption. The more bits that are compared simultaneously at each level, the quicker the worst case search will be. See Bennett’s column 15, beginning at line 54. Bennett further notes, “the use of two-entry tables increases the efficiency of memory usage in the scattered memory access device.” See column 17, beginning at line 26.

Thus it can be seen that Bennett approaches the knowledge tree search process from a different perspective than the Applicants, i.e., Bennett endeavors to reduce the number of comparison steps. There is no disclosure, suggestion, motivation or inference in Bennett

related to, “storing a first portion of the decision tree structure in a first memory having a first memory access time . . . [and] storing a second portion of the decision tree structure in a second memory having a second memory access time.”

Bialkowski does not disclose a binary tree search method, comprising, “storing a first portion of the decision tree structure in a first memory having a first memory access time . . . [and] storing a second portion of the decision tree structure in a second memory having a second memory access time.” Instead, Bialkowski discloses a specialized and highly optimized table lookup process “that stores the data identified by various ‘keys’ . . . so that during a look-up operation, the information can be scanned until a match of the key being processed is obtained. While a linear search could be implemented it is far too slow to be of practical use.”

The Examiner suggests that the Bennett and Bialkowski patents can be combined because the “claimed method would have been a highly desirable feature in this art for maintaining memory requirements and other hardware needs at a minimum.” However, the desirability of applicants’ claimed invention is not a legal basis for combining references in hindsight. One could argue that it is always desirable to combine elements of the prior art on a piecemeal basis to achieve a new invention, whether the elements be known electronic components, known mechanical structures or elements disclosed in issued patents. But the standard for combinability requires more, i.e., there must be some disclosure or suggestion in the references to make the combination. Such is not the case here. In fact, the absence of any disclosure as to specifically how the references should be combined only affirms that the rejection is a hindsight and piecemeal reconstruction of Applicants’ invention.

Each of the rejected dependent claims 2-17 further distinguish the invention over the art of record and therefore are deemed to be in condition for allowance. Here too, the Examiner constructs various combinations against the dependent claims by reasoning that it would have been “highly desirable” for a feature in one element of the prior art to be combined with a feature in another element of the prior art. Again, the examiner’s hindsight recognition that one element might be desirable for use in combination with another element merely states a result that would not have been recognized without the benefit of applicants’ patent application. There is simply no disclosure or suggestion that the elements can be

combined and the Examiner has not provided support for specifically how that combination would be made.

Within the second claim set, independent claim 18 and dependent claims 19-22, claims 18, 19 and 21 have been rejected under Section 103(a) over Bennett in view of Bialkowski. Claim 20 has been rejected under Section 103(a) over Bennett in view of Bialkowski and further in view of Pollack. Claim 22 has been rejected under Section 103(a) over Bennett in view of Bialkowski and further in view of Vahalia.

Applicants have amended the claim 18 to require “a first memory having a first memory access time and storing a first portion of the decision tree structure; a second memory having a second memory access time and storing a second portion of the decision tree structure wherein the first memory access time is less than the second memory access time.”

As stated above in conjunction with the Applicants’ remarks regarding claims 1-17, the cited prior art does also not disclose an apparatus as set forth in amended claim 18.

Claims 19-22 each further distinguish the invention as each defines a novel combination of additional features. It is therefore respectfully submitted that dependent claims 19-22 are allowable over the cited art.

Independent claim 23 and dependent claims 24 and 25 have also been rejected under Section 103(a) over Bennett in view of Bialkowski and further in view of Benayoun.

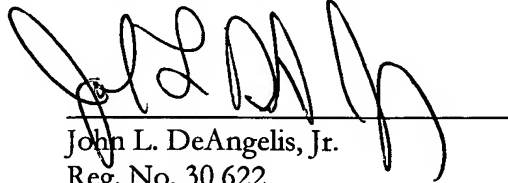
To overcome the rejection, the Applicants have amended the first and second memory elements of claim 23 as set forth above. With the addition of these amendments related to memory access time, claim 23 is allowable over the art of record.

Dependent claims 24 and 25 set forth additional inventive features and therefore are in condition for allowance.

The Applicants have attempted to comply with all of the points raised in the Office Action and it has been shown that all of the pending , i.e., claims 1-25 , are now in condition for allowance. In view of the foregoing amendments and discussion, it is requested that all of the rejections be withdrawn and that the application be passed to issuance.

If a telephone conference will assist in clarifying or expediting this Amendment or the claim changes made herein, Examiner Bell is invited to contact the undersigned at the telephone number below.

Respectfully submitted,



John L. DeAngelis, Jr.

Reg. No. 30,622

Beusse Brownlee Wolter Mora & Maire, P.A.

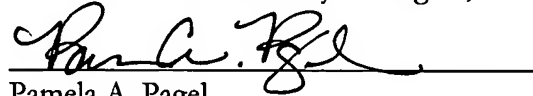
390 N. Orange Ave., Suite 2500

Orlando, FL 32801

(407) 926-7710

CERTIFICATE OF MAILING

I HEREBY CERTIFY that this Amendment is being deposited with the U.S. Postal Service as first class mail in an envelope addressed to: Mail Stop Amendment, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on this 26th day of August, 2005.



Pamela A. Pagel

ATTACHMENT 1

Replacement Sheet for Figure 4